

SMD Power Inductors

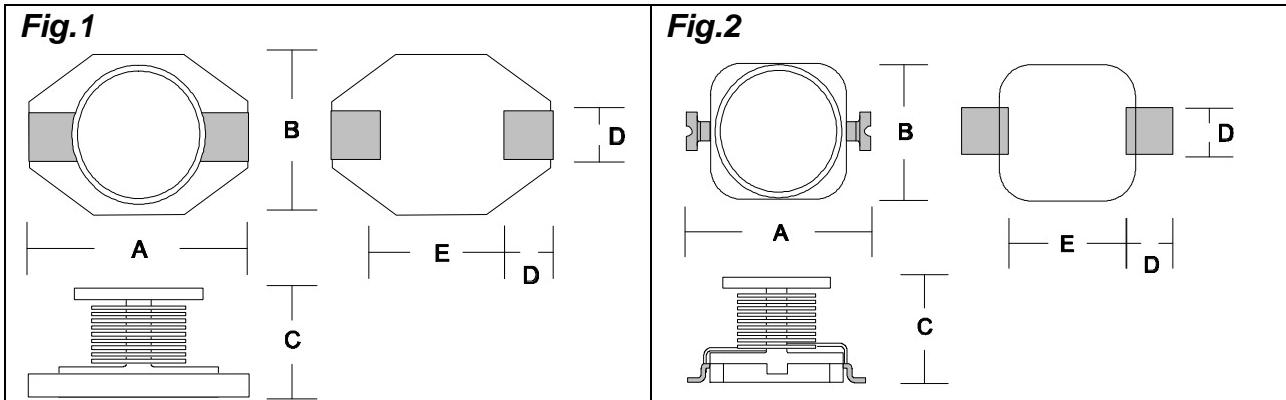
ECM UC Series

This particular range of surface mount inductors, the **UC** series now comes in seven package sizes each with their own individual benefits. The range features some of the smallest footprint sizes available for product of its type, in addition the new **UC1606** package is only 1.80mm high while offering safe current operation up to 2.5A (@ 1.0uH). While the **UC5022** is available up to 1.0mH @ 1 Amp while maintaining a total height less than 8.0mm.



Ferrite shielded versions of **UC1608**, **UC3316**, and **UC5022** are also available.

COMPONENT OUTLINE



DIMENSIONS

| ECM Type | Inductance Range | (Fig.) | A (mm) | B | C | D | E |
|----------|------------------|--------|--------|-------|-------|------|------|
| UC1606 | 1.0uH~1.0mH | 1 | 6.40 | 5.50 | 1.80 | 0.80 | 4.80 |
| UC1608 | 1.0uH~1.0mH | 1 | 6.60 | 4.45 | 1.27 | 1.02 | 4.32 |
| UC1818 | 1.0uH~3.3mH | 2 | 7.20 | 4.70 | 5.00 | 1.60 | 4.80 |
| UC3308 | 10uH~1.0mH | 1 | 12.95 | 9.40 | 3.00 | 2.54 | 7.62 |
| UC3316 | 1.0uH~1.0mH | 1 | 12.95 | 9.40 | 5.20 | 2.54 | 7.62 |
| UC3340 | 10uH~1.0mH | 1 | 12.95 | 9.40 | 11.43 | 2.54 | 7.62 |
| UC5022 | 1.0uH~1.0mH | 1 | 18.54 | 15.24 | 7.11 | 2.54 | 7.62 |

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SMD Power Inductors

| ECM Part | L (mH) | Tol % | R_{DC} MAX (W) | I_{DC} I_N (A) |
|---------------------|-------------------|------------------|---------------------------------------|---|
|---------------------|-------------------|------------------|---------------------------------------|---|

UC1606 Series

| | | | | |
|-------------|----------------|---|-------|------|
| UC1606T-1R0 | 1.0 @100 kHz | M | 0.05 | 2.50 |
| UC1606T-1R5 | 1.5 @100 kHz | M | 0.06 | 2.20 |
| UC1606T-2R2 | 2.2 @100 kHz | M | 0.07 | 1.80 |
| UC1606T-3R3 | 3.3 @100 kHz | M | 0.10 | 1.40 |
| UC1606T-4R7 | 4.7 @ 100kHz | M | 0.12 | 1.20 |
| UC1606T-6R8 | 6.8 @100 kHz | M | 0.19 | 1.10 |
| UC1606T-100 | 10 @ 100 kHz | M | 0.30 | 1.00 |
| UC1606T-150 | 15 @ 100 kHz | M | 0.40 | 0.80 |
| UC1606T-220 | 22 @ 100 kHz | M | 0.54 | 0.60 |
| UC1606T-330 | 33 @ 100 kHz | M | 0.74 | 0.50 |
| UC1606T-470 | 47 @ 100 kHz | M | 1.10 | 0.45 |
| UC1606T-680 | 68 @ 100 kHz | M | 1.60 | 0.35 |
| UC1606T-101 | 100 @ 100 kHz | M | 2.30 | 0.30 |
| UC1606T-151 | 150 @ 100 kHz | M | 3.20 | 0.25 |
| UC1606T-221 | 220 @ 100 kHz | M | 5.70 | 0.20 |
| UC1606T-331 | 330 @ 100 kHz | M | 8.20 | 0.16 |
| UC1606T-471 | 470 @ 100 kHz | M | 10.80 | 0.14 |
| UC1606T-681 | 680 @ 100 kHz | M | 17.20 | 0.12 |
| UC1606T-102 | 1000 @ 100 kHz | M | 22.60 | 0.08 |

UC1608 Series

| | | | | |
|-------------|----------------|---|-------|------|
| UC1608T-1R0 | 1.0 @100 kHz | M | 0.05 | 2.90 |
| UC1608T-1R5 | 1.5 @ 100kHz | M | 0.05 | 2.60 |
| UC1608T-2R2 | 2.2 @ 100 kHz | M | 0.06 | 2.30 |
| UC1608T-3R3 | 3.3 @ 100 kHz | M | 0.07 | 2.00 |
| UC1608T-4R7 | 4.7 @ 100kHz | M | 0.08 | 1.50 |
| UC1608T-6R8 | 6.8 @ 100 kHz | M | 0.11 | 1.20 |
| UC1608T-100 | 10 @ 100 kHz | M | 0.14 | 1.10 |
| UC1608T-150 | 15 @ 100 kHz | M | 0.20 | 0.90 |
| UC1608T-220 | 22 @ 100 kHz | M | 0.32 | 0.70 |
| UC1608T-330 | 33 @ 100 kHz | M | 0.44 | 0.58 |
| UC1608T-470 | 47 @ 100 kHz | M | 0.56 | 0.50 |
| UC1608T-680 | 68 @ 100 kHz | M | 0.75 | 0.40 |
| UC1608T-101 | 100 @ 100 kHz | M | 1.10 | 0.31 |
| UC1608T-151 | 150 @ 100 kHz | M | 1.70 | 0.27 |
| UC1608T-221 | 220 @ 100 kHz | M | 2.30 | 0.22 |
| UC1608T-331 | 330 @ 100 kHz | M | 3.30 | 0.18 |
| UC1608T-471 | 470 @ 100 kHz | M | 4.40 | 0.06 |
| UC1608T-681 | 680 @ 100 kHz | M | 6.80 | 0.14 |
| UC1608T-102 | 1000 @ 100 kHz | M | 12.00 | 0.10 |

TOLERANCE K=10%; M=20%.

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SMD Power Inductors

| ECM Part | L (mH) | Tol % | Q Min. (** MHz) | SRF Min. (MHz) | R_{DC} MAX (W) | I_{DC} I_N (mA) |
|---------------------|-------------------|------------------|----------------------------|-------------------------------|---------------------------------------|--|
|---------------------|-------------------|------------------|----------------------------|-------------------------------|---------------------------------------|--|

UC1818 Series

| | | | | | | |
|-------------|-----------------|---|----|-----|-------|------|
| UC1818T-1R0 | 1.0 @25.2 MHz | M | 60 | 110 | 0.04 | 2000 |
| UC1818T-1R2 | 1.2 @7.96 MHz | M | 80 | 90 | 0.04 | 2000 |
| UC1818T-1R5 | 1.5 @7.96 MHz | M | 80 | 70 | 0.04 | 2000 |
| UC1818T-1R8 | 1.8 @7.96 MHz | M | 80 | 60 | 0.04 | 2000 |
| UC1818T-2R2 | 2.2 @7.96 MHz | M | 80 | 50 | 0.04 | 2000 |
| UC1818T-2R7 | 2.7 @7.96 MHz | M | 80 | 40 | 0.05 | 1920 |
| UC1818T-3R3 | 3.3 @7.96 MHz | M | 80 | 35 | 0.06 | 1740 |
| UC1818T-3R9 | 3.9 @7.96 MHz | M | 80 | 32 | 0.07 | 1600 |
| UC1818T-4R7 | 4.7 @7.96 MHz | M | 80 | 30 | 0.08 | 1450 |
| UC1818T-5R6 | 5.6 @7.96 MHz | M | 80 | 28 | 0.10 | 1320 |
| UC1818T-6R8 | 6.8 @7.96 MHz | M | 80 | 26 | 0.12 | 1200 |
| UC1818T-8R2 | 8.2 @7.96 MHz | M | 80 | 24 | 0.14 | 1100 |
| UC1818T-100 | 10 @7.96 MHz | K | 70 | 22 | 0.17 | 1000 |
| UC1818T-120 | 12 @2.52 MHz | K | 60 | 18 | 0.20 | 900 |
| UC1818T-150 | 15 @2.52 MHz | K | 50 | 16 | 0.25 | 810 |
| UC1818T-180 | 18 @2.52 MHz | K | 50 | 14 | 0.30 | 740 |
| UC1818T-220 | 22 @2.52 MHz | K | 50 | 13 | 0.36 | 670 |
| UC1818T-270 | 27 @2.52 MHz | K | 50 | 12 | 0.43 | 610 |
| UC1818T-330 | 33 @2.52 MHz | K | 50 | 10 | 0.52 | 550 |
| UC1818T-390 | 39 @2.52 MHz | K | 50 | 10 | 0.62 | 500 |
| UC1818T-470 | 47 @2.52 MHz | K | 50 | 8.8 | 0.82 | 450 |
| UC1818T-560 | 56 @2.52 MHz | K | 50 | 7.5 | 1.00 | 410 |
| UC1818T-680 | 68 @2.52 MHz | K | 50 | 7.0 | 1.20 | 370 |
| UC1818T-820 | 82 @2.52 MHz | K | 50 | 6.5 | 1.40 | 340 |
| UC1818T-101 | 100 @2.52 MHz | K | 50 | 6.0 | 1.70 | 310 |
| UC1818T-121 | 120 @0.796 MHz | K | 70 | 5.5 | 1.70 | 310 |
| UC1818T-151 | 150 @0.796 MHz | K | 70 | 5.0 | 2.00 | 290 |
| UC1818T-181 | 180 @0.796 MHz | K | 70 | 4.5 | 2.20 | 270 |
| UC1818T-221 | 220 @0.796 MHz | K | 70 | 4.0 | 2.50 | 250 |
| UC1818T-271 | 270 @0.796 MHz | K | 70 | 3.7 | 3.00 | 230 |
| UC1818T-331 | 330 @0.796 MHz | K | 60 | 3.4 | 3.60 | 210 |
| UC1818T-391 | 390 @0.796 MHz | K | 60 | 3.0 | 4.30 | 190 |
| UC1818T-471 | 470 @0.796 MHz | K | 60 | 2.7 | 5.20 | 170 |
| UC1818T-561 | 560 @0.796 MHz | K | 60 | 2.5 | 6.20 | 155 |
| UC1818T-681 | 680 @0.796 MHz | K | 60 | 2.4 | 6.80 | 140 |
| UC1818T-821 | 820 @0.796 MHz | K | 60 | 2.2 | 8.20 | 130 |
| UC1818T-102 | 1000 @0.796 MHz | K | 60 | 2.0 | 11.00 | 115 |
| UC1818T-122 | 1200 @0.252 MHz | K | 80 | 1.7 | 12.00 | 105 |
| UC1818T-152 | 1500 @0.252 MHz | K | 80 | 1.6 | 14.00 | 95 |
| UC1818T-182 | 1800 @0.252 MHz | K | 80 | 1.5 | 17.00 | 85 |
| UC1818T-222 | 2200 @0.252 MHz | K | 80 | 1.3 | 22.00 | 75 |
| UC1818T-272 | 2700 @0.252 MHz | K | 80 | 1.2 | 24.00 | 70 |
| UC1818T-332 | 3300 @0.252 MHz | K | 80 | 1.1 | 27.00 | 65 |

** = Test Frequency as specified in 'L' column

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| ECM Part | L (mH) | Tol % | R_{DC} MAX (W) | I_{DC} I_N (A) |
|---------------------|-------------------|------------------|---------------------------------------|---|
|---------------------|-------------------|------------------|---------------------------------------|---|

UC3308 Series

| | | | | |
|-------------|----------------|---|------|-----|
| UC3308T-100 | 10 @ 100 kHz | M | 0.09 | 2.4 |
| UC3308T-150 | 15 @ 100 kHz | M | 0.12 | 2.0 |
| UC3308T-220 | 22 @ 100 kHz | M | 0.19 | 1.6 |
| UC3308T-330 | 33 @ 100 kHz | M | 0.25 | 1.4 |
| UC3308T-470 | 47 @ 100 kHz | M | 0.32 | 1.0 |
| UC3308T-680 | 68 @ 100 kHz | M | 0.55 | 0.9 |
| UC3308T-101 | 100 @ 100 kHz | M | 0.70 | 0.7 |
| UC3308T-151 | 150 @ 100 kHz | M | 1.00 | 0.6 |
| UC3308T-221 | 220 @ 100 kHz | M | 1.60 | 0.5 |
| UC3308T-331 | 330 @ 100 kHz | M | 2.20 | 0.4 |
| UC3308T-471 | 470 @ 100 kHz | M | 3.30 | 0.3 |
| UC3308T-681 | 680 @ 100 kHz | M | 4.40 | 0.2 |
| UC3308T-102 | 1000 @ 100 kHz | M | 7.00 | 0.1 |

UC3316 Series

| | | | | |
|-------------|----------------|---|------|-----|
| UC3316T-1R0 | 1.0 @ 100 kHz | M | 0.09 | 9.0 |
| UC3316T-1R5 | 1.5 @ 100 kHz | M | 0.10 | 8.0 |
| UC3316T-2R2 | 2.2 @ 100 kHz | M | 0.12 | 7.0 |
| UC3316T-3R3 | 3.3 @ 100 kHz | M | 0.15 | 6.4 |
| UC3316T-4R7 | 4.7 @ 100 kHz | M | 0.18 | 5.4 |
| UC3316T-6R8 | 6.8 @ 100 kHz | M | 0.22 | 4.6 |
| UC3316T-100 | 10 @ 100 kHz | M | 0.29 | 3.8 |
| UC3316T-150 | 15 @ 100 kHz | M | 0.46 | 3.0 |
| UC3316T-220 | 22 @ 100 kHz | M | 0.58 | 2.6 |
| UC3316T-330 | 33 @ 100 kHz | M | 0.10 | 2.0 |
| UC3316T-470 | 47 @ 100 kHz | M | 0.14 | 1.6 |
| UC3316T-680 | 68 @ 100 kHz | M | 0.18 | 1.4 |
| UC3316T-101 | 100 @ 100 kHz | M | 0.26 | 1.2 |
| UC3316T-151 | 150 @ 100 kHz | M | 0.38 | 1.0 |
| UC3316T-221 | 220 @ 100 kHz | M | 0.61 | 0.8 |
| UC3316T-331 | 330 @ 100 kHz | M | 0.93 | 0.6 |
| UC3316T-471 | 470 @ 100 kHz | M | 1.27 | 0.5 |
| UC3316T-681 | 680 @ 100 kHz | M | 1.84 | 0.4 |
| UC3316T-102 | 1000 @ 100 kHz | M | 2.47 | 0.3 |

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| ECM Part | L (mH) | Tol % | R_{DC} MAX (W) | I_{DC} I_N (A) |
|---------------------|-------------------|------------------|---------------------------------------|---|
|---------------------|-------------------|------------------|---------------------------------------|---|

UC3340 Series

| | | | | |
|-------------|----------------|---|-------|-----|
| UC3340T-100 | 10 @ 100 kHz | M | 0.033 | 8.0 |
| UC3340T-150 | 15 @ 100 kHz | M | 0.042 | 7.0 |
| UC3340T-220 | 22 @ 100 kHz | M | 0.054 | 5.5 |
| UC3340T-330 | 33 @ 100 kHz | M | 0.08 | 4.0 |
| UC3340T-470 | 47 @ 100 kHz | M | 0.10 | 3.8 |
| UC3340T-680 | 68 @ 100 kHz | M | 0.17 | 3.0 |
| UC3340T-101 | 100 @ 100 kHz | M | 0.22 | 2.5 |
| UC3340T-151 | 150 @ 100 kHz | M | 0.34 | 2.0 |
| UC3340T-221 | 220 @ 100 kHz | M | 0.44 | 1.6 |
| UC3340T-331 | 330 @ 100 kHz | M | 0.70 | 1.2 |
| UC3340T-471 | 470 @ 100 kHz | M | 0.95 | 1.0 |
| UC3340T-681 | 680 @ 100 kHz | M | 1.20 | 1.0 |
| UC3340T-102 | 1000 @ 100 kHz | M | 2.00 | 0.8 |

UC5022 Series

| | | | | |
|-------------|----------------|---|-------|-----|
| UC5022T-1R0 | 1.0 @ 100 kHz | M | 0.011 | 20 |
| UC5022T-2R2 | 2.2 @ 100 kHz | M | 0.014 | 16 |
| UC5022T-3R3 | 3.3 @ 100 kHz | M | 0.016 | 14 |
| UC5022T-6R8 | 6.8 @ 100 kHz | M | 0.022 | 12 |
| UC5022T-100 | 10 @ 100 kHz | M | 0.032 | 10 |
| UC5022T-150 | 15 @ 100 kHz | M | 0.036 | 8.0 |
| UC5022T-220 | 22 @ 100 kHz | M | 0.047 | 7.0 |
| UC5022T-330 | 33 @ 100 kHz | M | 0.066 | 5.5 |
| UC5022T-470 | 47 @ 100 kHz | M | 0.087 | 4.5 |
| UC5022T-680 | 68 @ 100 kHz | M | 0.13 | 3.5 |
| UC5022T-101 | 100 @ 100 kHz | M | 0.19 | 3.0 |
| UC5022T-151 | 150 @ 100 kHz | M | 0.25 | 2.6 |
| UC5022T-221 | 220 @ 100 kHz | M | 0.38 | 2.4 |
| UC5022T-331 | 330 @ 100 kHz | M | 0.56 | 1.9 |
| UC5022T-471 | 470 @ 100 kHz | M | 0.85 | 1.4 |
| UC5022T-681 | 680 @ 100 kHz | M | 1.20 | 1.2 |
| UC5022T-102 | 1000 @ 100 kHz | M | 1.80 | 1.0 |

TOLERANCE K=10%; M=20%.